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Counter track joint with track turning point

Abstract

A constant velocity joint 11 in the form of a counter track joint with the following characteristics:

an outer joint part 12 which comprises a first longitudinal axis A_{12} and an attaching end and an aperture end which are axially opposed relative to one another, and which joint 11 further comprises first outer ball tracks 18 and second outer ball tracks 20;

an inner joint part 15 which comprises a second longitudinal axis A_{22} and attaching means for a shaft 22 pointing to the aperture end of the outer joint part 12, and which further comprises first inner ball tracks 19 and second inner ball tracks 21;

the first outer ball tracks 18 and the first inner ball tracks 19 form first pairs of tracks;

the second outer ball tracks 20 and the second inner ball tracks 21 form second pairs of tracks with one another and the pairs of tracks each accommodate a torque transmitting ball 17_1 , 17_2 ;

a ball cage 16 is positioned between the outer joint part 12 and the inner joint part 15 and comprises circumferentially distributed cage windows 24_1 , 24_2 which each accommodate at least one of the balls 17_1 , 17_2 ;

when the joint is in the aligned condition, the aperture angle δ_1 of the first pairs of tracks opens in the central joint plane E from the aperture end to the attaching end of the outer joint part 12;

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when the joint is in the aligned condition, the aperture angle δ_2 of the second pairs of tracks opens in the central joint plane E from the attaching end to the aperture end of the outer joint part 12,

wherein the central track lines L_{18} , L_{19} of the first pairs of tracks each have a turning point T_{1-2} and that the centre angle (β) at the turning point T_{1-2} , with reference to the central joint plane E is greater than 4° .

Figure 1

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